



Technology and Motivation: Can Computers Motivate Students to Read?

By **Quality Quinn**, senior advisor to CompassLearning and noted author and literacy consultant

Three thousand high school students drop out of school every day. The statistics are perilous. Teachers lack the abilities and tools to motivate students to become better readers and become more engaged in their content-area classes.

The widely circulated piece, “*Reading Next: A Vision for Action and Research in Middle and High School Literacy*,” prepares a platform for much-needed attention to Grades 5–12 reading demands and the instruction to support it.

Between instructional and infrastructure elements, 15 key areas—including direct, explicit comprehensive instruction, strategic tutoring, and ongoing formative assessment of students—were identified for action and continued research. Educators and researchers can overcome the challenges of 14 of the 15 elements identified, but “motivation” (student self-directed learning), is the most difficult and, perhaps, the most important. Without developing motivation, the other 14 elements lose context, and I believe one of the other 15 elements, “technology,” holds the key to developing motivation.

Motivation means having the desire and willingness to do something. Teachers who want to motivate students to stay on task, increase their knowledge and skills, and improve their ability to process information must guide the initiation, direction, intensity and persistence of learning behavior. But how do we as educators do that?

Most researchers agree on the following five key factors that impact motivation:

- **Challenge:** Students are motivated when they are working toward personally meaningful goals whose attainment requires activity at a continuously optimal level of difficulty. This condition is known as the Zone of Proximal Development (Vygotsky) and is vital to the learning process. To increase the level of engagement, students must be provided with learning tasks that continue to be interesting, meaningful, and at least somewhat culturally relevant at a level of difficulty that is challenging but within reach. An example might be the girl practicing “shooting hoops” alone. From layups to three-pointers, she decides what is the appropriate level of difficulty. She has been “coached” on how to self-assess, analyze, and monitor mistakes.
- **Interest:** Motivation is impacted by the learner’s level of interest in the activity. An optimal level of discrepancy between present knowledge and skills, and what **could be** if the learner became engaged in the activity, will influence motivation for the task. Novelty also initiates interest. When the activity is novel, the learner may become curious about engaging in a new learning experience. A sense of wonder is crucial to the learning process because it fosters a desire for more information. For example, a student may be unmotivated to learn Latin and Greek cognates, prefixes and suffixes, but when contextualized by history, a compelling film like Homer’s *The Odyssey*, or a game show-like competition, their interest becomes attached to something meaningful.



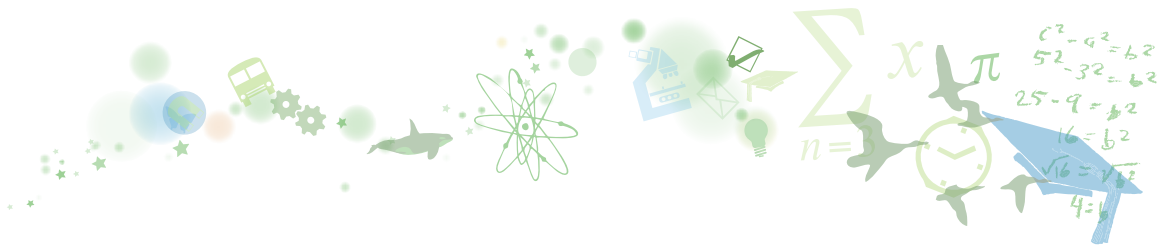
- **Level of Concern:** Even the most disenfranchised student will respond to a concern for their progress and well-being as people as well as learners. Students need to have consistent and authentic feedback. Noted educator Madeline Hunter called it “knowledge of results.” Teachers and instructional tools should convey high expectations (letting students know “what good looks like”) and provide frequent assessments (something that shows small increments of growth) to sustain students’ motivation and provide a supportive and responsive classroom culture. For example, teachers’ current focus on formative assessment provides meaningful data for student-teacher and teacher-parent discussion.
- **Success:** When students discover or are put in a situation to feel satisfaction and accomplishment, it initiates motivation or continues it. Feelings of success strengthen achievement in any area: athletics, academics, or social situations. Instruction must include powerful opportunities for success, such as scaffolding and guided practice and, in certain cases, this instructional support must overcome some students’ strong self-inflicted failure messaging.
- **Reward:** Students, like everyone else, are motivated by rewards for their efforts. Rewards come in many forms but schools tend toward material rewards (in Texas, during state assessments, when you hand out the number two pencils, the kids smell pizza!) or the reward of **no** punishment, i.e., If you do this, you won’t have to stay after school, take remedial reading, write an essay, do a report, etc. While external rewards and recognition (your name on the good list, not the bad) go a long way, good instruction must provoke a learner toward an intrinsic reward system that leads to self-directed learning. This is a difficult thing to measure or even observe, but teachers who create environments that allow students to experience the internal reward of “I’ve got it” or “I’m getting better” or “This is easier than I thought” are promoting motivation.

Given these five motivation-influencing elements, the case can be made that the teachers’ shoulders are not broad enough to assess, design, and apply supplemental reading and writing to every below-level reader at the appropriate level of difficulty. However, when you examine the fundamental strengths of information technology—specifically software—and its ability to store, respond, differentiate, aggregate, and disaggregate in vivid, multi-modal ways, it is clear that motivation and technology are a “natural pairing.” If you don’t believe the research, ask a student. As one student boldly put it, “The computer doesn’t think I’m stupid!”

By now, grade 5–12 teachers are beginning to receive professional development on research-based reading instruction, and by the sweat of this literacy consultant’s (and others’) brows, many middle and high school content teachers are adding the Apprentice model of reading and writing in their respective content areas. But, in many cases, below-level readers are shunted off to remedial classes with every ameliorative name under the sun, collecting points as they cycle through various stations and suffering through more whole-class or small-group instruction. This is not motivating.

This begs the question: What is the highest and best use of technology as part of the “mix of intervention elements” (*Reading Next*, 2005) for adolescent readers?

Reading software, with recent—and I mean recent—copyrights that leverage the most current advances in media design and cultural and kid-sensitive iconography, combined with rigorous research-based content, have the capacity to create “flow,” the feeling of complete and energized focus in an activity with a high level of enjoyment. To achieve flow, the activity must balance the challenge of the activity with the ability of the participant. If the activity is too challenging, participants experience anxiety; if it is too easy, they become bored.



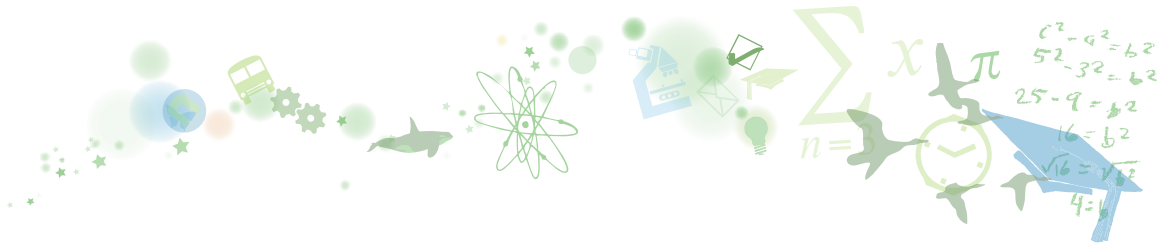
Because of technology's fundamental ability to store hundreds, if not thousands, of compelling opportunities built around solid reading content, it keeps the learner in flow while increasing the learner's fluency, comprehension, and language skill. Hot, new supplemental reading software attends to the interception of the Zone of Proximal Development and game theory with flow—Vygotsky meet Csikszentmihalyi (I'd like to buy a vowel!).

None of this replaces or supplants the power or importance of a highly qualified and informed teacher. But, when it comes to motivation, advances in reading technology to supplement or strategically intervene are undeniable and unbeatable if careful planning and preparation are in place.

To summarize, research can help us with the enormous challenge of increasing a student's motivation and self-direction as a learner. And, as cited in *Reading Next*, technology—specifically reading software—that maximizes compelling instructional reinforcement and guided practice is a natural partner in meeting this challenge of motivating students.

End-of-article Notation

Quality Quinn is a senior advisor to CompassLearning, Inc., one of the nation's leading providers of K–12 education software, where she works with the company on software development and key education initiatives and provides professional development services. In addition, Quinn is a noted author, international literacy expert and consultant who has received numerous awards for her work with beginning reading and assessment systems. Quinn is also an advisor to the successful Texas Reading Initiative that has resulted in minority students attaining some of the highest gains in reading improvement in the country. In addition, through her own non-profit organization, Project EarlyWord, Quinn is leading a new bilingual initiative between Mexico and the United States. She holds a Bachelor of Arts degree in English from York College of Pennsylvania and a Master of Arts with a concentration in Curriculum and Instruction from University of San Diego.



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